

Row Labels	Task ID #	Task Title	Task Division	Task Lead	Delivery Date	Product Description
ABS	ABS	Membrane and UV technology Evaluations under LT2	WSWRD	(Jeff Adams)	Q4 FY2012	Abstract/oral presentation prepared for ASDWA Annual Conference 2012
		How the US EPA ETV Protocol Clarifies Aspects of UVDGM and Facilitates Advances in UV Validation	WSWRD	(Jeff Adams)	Q3 FY2012	Abstract/oral presentation prepared for AWWA ACE 2012
ACE	ACE 004A	Advanced physical, chemical, and optical analyses of anthropogenic, pyrogenic, and biogenic source emissions	APPCD	HAYS, MICHAEL D	Q3 FY2012	Brief communication on concerns regarding 24-h sampling for formaldehyde, acetaldehyde, and acrolein using DNPH-coated sorbents
	ACE 004B	Advanced physical, chemical, and optical analyses of anthropogenic, pyrogenic, and biogenic source emissions	APPCD	HAYS, MICHAEL D	Q3 FY2012	Journal article on the effects of operating conditions on PM organic compounds from light-duty vehicles.
	ACE 004C	Advanced physical, chemical, and optical analyses of anthropogenic, pyrogenic, and biogenic source emissions	APPCD	HAYS, MICHAEL D	Q3 FY2012	Journal article on the characterization of carbonaceous aerosols emitted from outdoor wood boilers.
	ACE 017	Assessing the Potential Role of Energy Technologies and Fuels in Meeting Agency Goals	APPCD	YELVERTON, WILLIAM H	Q3 FY2012	Publication describing the development and demonstration of a method for analyzing the potential role of technology breakthroughs in revolutionizing the energy system in terms of lowering the costs of satisfying environmental goals.
	ACE 019	EPA ORD research on near-source air pollution and mitigation opportunities; Southeast Diesel Collaborative (SEDC) annual meeting,	APPCD	Hagler	8/6/2012	Presentations/Posters
	ACE 027	Biomass for fuels, heat and power: Evaluating the system-level impacts of bioenergy production	APPCD	DODDER, REBECCA S	Q4 FY2012	Revised database expanding the thermochemical and other novel conversion pathways represented in the U.S. EPA MARKAL energy system model.
	ACE 034	EPA/FHWA Near Road Collaboration Project: Results from Las Vegas & Detroit, Presenter; Federal Highway Administration	APPCD	Kimbrough	6/13/2012	Presentations/Posters
		Presentation: Traffic Data Requirements: Meeting the Needs of Multiple Users. North American Traffic Monitoring Exposition and conference	APPCD	Kimbrough	6/7/2012	Presentations/Posters
	ACE 060	Streamlining lifecycle greenhouse gas emissions of coal, conventional and unconventional natural gas for electricity generation; 2012 AIChE Annual Meeting	APPCD	Ozge Kaplan	11/1/2012	Presentations/Posters
	ACE 060a	Assessment of Methane and VOC Emissions from Select Upstream Oil and Gas Production Operations Using Remote Measurements, Interim Report on Recent Survey Studies; Annual Conference of the Air & Waste Management Association, in San Antonio, Texas	APPCD	Thoma	6/20/2012	Presentations/Posters
	ACE 060b	Field assessment of high priority fugitive and area source emissions and impacts	APPCD	THOMA, EBEN D	Q3 FY2012	EPA Report: Quantifying Methane Abatement Efficiency at Three Municipal Solid Waste Landfills



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ACE	ACE 064	An integrated micrometeorological flux measurement system for reactive nitrogen and sulfur compounds; National Atmospheric Deposition Program Fall Meeting, Portland, Maine	APPCD	John T. Walker	Oct 3, 2012	Presentations/Posters
		Development and testing of an integrated system for measuring concentrations and fluxes of ozone and speciated nitrogen and sulfur compounds	APPCD	WALKER, JOHN T	Q4 FY2012	Documentation of QA/QC and operating procedures of prototype flux measurement system. Manuscript - Verification of MARGA multipollutant instrument.
						Journal article - Verification of MARGA multipollutant instrument
	ACE 066	Summary of Aircraft BC Measurements; SAE E-31 annual meeting in San Diego the week of. This will be a summary of all work conducted to date.	APPCD	Kinsey	6/18/2012	Presentations/Posters
	ACE 071	Development of low-cost measurement techniques and data optimization strategies for near-source sampling	APPCD	HAGLER, GAYLE S	Q4 FY2012	Report on existing and emerging low-cost sensor capabilities, and capturing outputs from the Low-Cost Sensor Solutions for Fence Line and Community Monitoring Workshop
	ACE 082	Energy and Climate Assessment Using the MARKAL Model	APPCD	LENOX, CAROL S	Q4 FY2012	Incorporation of OAQPS alternative scenarios of the future into the MARKAL energy system model and summary report of how these scenarios can be used to support Regulatory Impact Assessments
						Summary report of sector based alternatives using the Kaya identity as a scenario methodology for energy system analyses
						Updated MARKAL existing coal representation to include generation capacity broken down by coal type, facility size, and vintage.
						Updated regional and national MARKAL energy system databases calibrated to the AEO 2012
	ACE 092	Role of Vegetation in Mitigating Near Road Emissions; EPA Region 9, San Francisco	APPCD	Baldauf	6/7/2012	Presentations/Posters
	ACE 094	Evaluation of Cookstoves for Developing Countries	APPCD	THOMPSON, ROBERT C	Q4 FY2012	Journal article on analysis of cookstove pollutant emissions of gases and particulate matter, including carbonaceous materials and energy efficiency, from laboratory evaluation
			OIAA	THOMPSON, ROBERT C	Q1 FY2013	Life cycle assessment of coal burning for home heating on the Navajo Nation
	ACE 105	Field measurements of air-surface exchange processes and speciated deposition budgets of nitrogen and sulfur compounds and ozone in key ecosystems	APPCD	WALKER, JOHN T	Q4 FY2012	Journal article - Measurement of atmospheric organic nitrogen
	ACE 111	Greenhouse Gas Mitigation Options Database and Analytical Modeling Approach; Joint US EPA & NCSU Poster Session	APPCD	Beck and Bhandar	5/15/2012	Presentations/Posters



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ACE	ACE 111	Greenhouse Gas Mitigation Technology (Abbreviated version of GCRP presentation); Association for Environmental Studies & Sciences, Santa Clara, Calif.	APPCD	F. Princiotta	6/22/2012	Presentations/Posters
		Greenhouse Gas Mitigation Technology (Abbreviated version of GCRP presentation); Air & Waste Management Association Mega Symposium, Baltimore, Maryland	APPCD	F. Princiotta	8/23/2012	Presentations/Posters
		Greenhouse Gas Mitigation Technology (Abbreviated version of GCRP presentation); Air & Waste management Conference, San Antonio, Texas	APPCD	F. Princiotta	6/20/2012	Presentations/Posters
		Greenhouse Gas Mitigation Technology (Abbreviated version of GCRP presentation); Clearwater Coal Conference, Clearwater Florida	APPCD	F. Princiotta	6/4/2012	Presentations/Posters
	ACE 149	Presentation: Crude glycerol combustion: particulate, acrolein, and other volatile organic emissions; 34th International Symposium on Combustion, Warsaw Technical University, Warsaw, Poland	APPCD	W. Linak	7/30/2012	Presentations/Posters
	ACE 153	Life Cycle Assessment of Energy Systems	STD	HAWKINS, TROY R	Q1 FY2013	Comparison of Environmental Releases in Ethanol and Gasoline Production - Debalina Sengupta
						Life Cycle Environmental Assessment of Gasoline and Dry-Grind Corn Ethanol Blends - Troy Hawkins
					Q3 FY2012	Estimating Impacts Across the Life Cycle of Corn Ethanol and Gasoline - Troy Hawkins
						Spatially Explicit Life Cycle Assessment for Biofuel Feedstock Production - Xiabo Xue
					Q4 FY2012	Assessing Resource Intensity and Renewability of Cellulosic Ethanol - Ray Smith
						Evaluating Ecotoxicity and Human Health Impacts of Pesticides in Midwest Corn Farming - Xiabo Xue
						Workshop report on design of sustainable supply chains and product systems including biofuels
	ACE 166	Mitigation, Adaptation, and Climate Policy Responses in Practice	APPCD	FELGENHAUER, TYLER N	Q4 FY2012	Paper, "Modeling Adaptation as a Flow and Stock Allocation Decision with Mitigation"
						Paper, "Multiple Adaptation Types with Mitigation: A Framework for Policy Analysis"
	ACE 198	Carbonaceous Particulate Emitted from Light Duty Vehicles Operating on Ethanol Fuel Blends; American Association for Aerosol Research	APPCD	Hays	Oct, 2012	Presentations/Posters
	ACE 203	Regional Adaptation Case Studies for Sustainable Water Resources	WSWRD	YANG, YINGPING J	Q4 FY2012	Decision-making framework to evaluate the full costs and benefits of different mitigation and adaptation actions



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ACE	ACE 207	Presentation: Understanding the Role of a nano Ce Additive in the Size Distribution and Organic Composition of the Particulate Phase of Diesel Emissions; American Association for Aerosol Research Annual Meeting, Minneapolis, MN	APPCD	D. Nash	10/9/2012	Presentations/Posters
	ACE 209	Retrofittability Assessment of Greenhouse Gas (GHG) Mitigation Technologies for Coal-fired Power Plants	APPCD	CHANG, JOHN C	Q1 FY2013	Report on Retrofittability Assessment of Greenhouse Gas (GHG) Mitigation Technologies for Coal-fired Power Plants
	ACE 221	SPECIATE Database	APPCD	BECK, LESLIE L	Q4 FY2012	SPECIATE Version 4.3. Improved Chemical and Physical Emission Speciation Profiles
	ACE 222	Stationary Source Instrumental and Time-Integrated Reference and Continuous Monitoring Methods Development and Validation for HAPs and GHGs	APPCD	RYAN, JEFFREY V	Q1 FY2013	Laboratory data reports and procedures to support development of Performance Specifications for HCl monitoring
	ACE 224	Surrogacy Testing on a Pilot-Scale Coal-Fired Power Plant (MPCRF)	APPCD	YELVERTON, TIFFANY L	Q4 FY2012	Data summary of HCl control using trona injection
	ACE 225	ACE 225 - Sustainability Metrics for Transportation Energy Systems (TES)	STD	INGWERSEN, WESLEY W	Q2 FY2012	Dealing with Emergy Algebra in the Life Cycle Assessment Framework - Wesley Ingwersen
						The Added Value of Integrating Emergy into LCA - Wesley Ingwersen
					Q3 FY2012	Land Use and Ecological Footprint of Biofuels - Troy Hawkins
						Supply Chain of Biofuels using an Ecological Footprint Approach - Wesley Ingwersen
					Q4 FY2012	Journal article on the application of selected sustainability metrics to the corn ethanol and gasoline supply chains
						Life Cycle Assessment using emergy to quantify sustainability - Wesley Ingwersen
						The Added Value of Integrating Emergy into LCA - Wesley Ingwersen
	ACE 251	Water Demands of Future Energy Portfolios under a Changing Climate	APPCD	DODDER, REBECCA S	Q4 FY2012	Improved water consumption and withdrawal numbers in MARKAL database, including uncertainty analysis of water usage rates of various energy production processes
	EPA 178	Natural Gas, Fertilizer, N2O and Biofuels Assessment	APPCD	DODDER, REBECCA S	Q1 FY2013	Technical and economic assessment of the linkages between natural gas markets, domestic and foreign ammonia/fertilizer production, and fertilizer regimes for current future biomass feedstocks
					Q4 FY2012	N2O agricultural emissions data for switchgrass and corn for development of regional N2O budgets
CSS	1.2.1	1.2.1: Detecting, quantifying and characterizing nanomaterials	WSWRD	TOLAYMAT, THABET M	In ORD Clearance	"The Implications of Fe2O3 and TiO2 Nanoparticles on the Removal of Trichloroethylene by Activated Carbon in the Presence and Absence of Humic Acid" (Craig Patterson)



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CSS	1.2.1	1.2.1: Detecting, quantifying and characterizing nanomaterials	WSWRD	TOLAYMAT, THABET M	Q4 FY2012	"Removal of Stabilized Silver Nanoparticles by Potable Water Treatment Processes" (Craig Patterson)
						A Comparison of a Novel Muffle Furnace-based Alkaline Fusion Digestion Technique with Hydrofluoric Acid Microwave and Bunsen Burner Alkaline Fusion Digestion Techniques for Analysis of Anthropogenic Titanium Dioxide in Environmental Matrices (Analytica Chimica Acta) (Chris Impellitteri)
						Abstract Approved on "Removal of Stabilized Silver Nanoparticles from Ohio River Water by Potable Water Treatment Processes" 2012 AWWA Water Quality Technology Conference - Toronto, ON Canada (Craig Patterson)
						Transformation of Silver Nanoparticles in Fresh, Aged, and Incinerated Biosolids (Water Research) (Chris Impellitteri)
	4.2.2	4.2.2: Science, approaches, tools, and data for informing cumulative risk assessment and risk management for high priority classes/groups of chemicals	APPCD	LAU, CHRISTOPHER S	Q3, FY2012	Laboratory Study of Polychlorinated Biphenyl (PCB) Contamination and Migration in Buildings, Part 1: Emission from Selected Primary Sources
						Literature Review of Remediation Methods for PCBs in Buildings
					Q4 FY2012	(6) Market trend monitoring for PFCAs in consumer articles (NRMRL). (Yes...this product is on track. THIS IS A HIGH PRIORITY PRODUCT.)
					Q4, FY2012	Laboratory Study of Polychlorinated Biphenyl (PCB) Contamination and Migration in Buildings, Part 2: Transport from Primary Sources to Building materials and Settled Dust
						Laboratory Study of Polychlorinated Biphenyl (PCB) Contamination and Migration in Buildings, Part 3: Evaluation of the Encapsulation Method; (9) Evaluation of PCB encapsulants. (Report On track for delivery....This product was missing from the list. JRW, 5/31... THIS IS A HIGH PRIORITY PRODUCT.)
						Laboratory Study of Polychlorinated Biphenyl (PCB) Contamination and Migration in Buildings, Part 4: Evaluation of the Activated Metal Treatment System (AMTS) for On-site Destruction of PCCBs



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CSS	4.2.2	Behavior and fate of PFOA and PFOS in sandy aquifer sediment. Ground Water Monitoring & remediation	GWERD	Ferrey, M. L.; Wilson, J. T.; Adair, C.; Su, C.; Fine, D. S.; Liu, X.; Washington, J. W.	2012	Journal Article (Article is relevant to work under 2.3.1 and 4.2.2, but was not a planned product or milestone for these tasks, nor was it included in the task description. Has relevance to work to be initiated in FY2013 or FY2014 under 4.2.2.)
	5.1.1	5.1.1: Integration of Federal data sources to form sustainability data network	STD	MEYER, DAVID E	Q4 FY2012	(1) Preliminary sustainability database design based on a model case of LCI generated for a nano-silver consumer product and developed in collaboration with QCSPP and in coordination with related CSS databases (either developed or proposed). (Yes...product on track)
	5.1.2	5.1.2: Assessment and mitigation case studies of targeted chemicals and products to identify areas to incorporate sustainability	STD	BLESS, DIANA R	Q1 FY2013	(11) A workshop will be held to evaluate current trends in electronic manufacturing and identify opportunities to incorporate green principles for sustainability. (Yes...product on track for Q1 of FY13. It was delayed from FY12 to FY13.)
					Q4 FY2012	(1) the following will be delivered: (i) a life cycle inventory (LCI) for a silver nanoparticle with documented data gaps and its demonstrated application in a life cycle assessment (LCA); (ii) a life cycle inventory for a CNT-composite product and its demonstrated use in LCA. 1 patent issued, 1 patent application, 1 journal article, 1 presentation by Carl Mazza/OAR (Yes...product on track)
		A two and half year performance evaluation of a field test on treatment of source zone tetrachloroethene and its chlorinated daughter products using emulsified zero valent iron nanoparticles.	GWERD	Su, C.; Puls, R. W.; Krug, T. A.; Watling, M. T.; O'Hara, S. K.; Quinn, J. W.; Ruiz, N. E.	2012	Journal Article
		Characterization of carbon nano-onions for heavy metal ion remediation.	GWERD	Seymour, M. Seymour, M. B.; Su, C.; Gao, Y.; Lu, Y.; Li, Y.	2012	Journal Article
		Distinct effects of humic acid on transport and retention of TiO <sub>2</sub> rutile nanoparticles in saturated porous media.	GWERD	Chen, G.; Liu, X.; Su, C.	2012	Journal Article
		Distinct effects of humic acid on transport and retention of TiO <sub>2</sub> rutile nanoparticles in saturated sand columns.	GWERD	Chen, G.; Liu, X.; and Su, C.	6/1/2012	Presentations/Posters
		Influence of collector surface composition and water chemistry on the deposition of cerium dioxide nanoparticles: QCM-D and column experiment approaches.	GWERD	Liu, X.; Chen, G.; Su, C.	2012	Journal Article



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CSS	5.1.2	Travel distance and transformation of injected emulsified zero valent iron nanoparticles in the subsurface during two and half years.	GWERD	Su, C.; Puls, R. W.; Krug, T. A.; Watling, M. T.; O'Hara, S. K.; Quinn, J. W.; Ruiz, N. E.	2012	Journal Article
		Use of Metal Nanoparticles in Environmental Cleanup (Chapter 10	GWERD	Kanel, Sushil R.; Su, C.; Patel, Upendra; Agrawal, Abinash.	2012	Book Chapter
	5.2.1	5.2.1: Applications of green chemistry for sustainable chemical processes	STD	NAMBOODIRI, VASUDEVAN	Q3 FY2012	(1) Joint patent application with CRADA partner for butanol recovery from dilute solutions during manufacturing via membrane based separation processes in response to the need of OTAQ (OAR) to assess biobutanol as a fuel substitute for bioethanol to potentially lessen greenhouse gas emissions. (Yes...product on track)
					Q4 FY2012	(2) Demonstration of the successful synthesis and characterization of a cellulose membrane with controllable cross-linking for application in sustainable water treatment. (Yes...product on track)
	5.2.2	5.2.2: Advancing green engineering for sustainable chemical processes	STD	BARRETT, WILLIAM M	Q4 FY2012	(1) Documentation of the development of a finite element method (FEM) simulation model describing a case study of a spinning tube in-tube reactor which can be used to develop innovative solutions for pollution prevention through sustainability. (On Track)



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CSS	5.2.3	5.2.3 Sustainability Indicators for Chemical Processes	STD	RUIZ-MERCADO, GERARDO	Q2 FY2012	Demonstration of how the GREENSCOPE Sustainability Indicator model can evaluate human health and environmental risks, for an example such as the manufacture of biodiesel. Beta version of the software tool GREENSCOPE.xlsx. Journal article: Sustainability indicators for chemical processes: III. Case study, biodiesel production. Journal article: Chemical process optimization using a sustainability assessment and design tool. To be submitted Q4 FY 2012; Journal article: Process sustainability performance during the synthesis of biodiesel using different feedstocks and different production technologies. To be submitted Q4 FY 2012. Presentation: Ruiz-Mercado G.J.; Smith, R.L.; Gonzalez, M.A.; Implementation of the GREENSCOPE Design Tool to Develop Sustainable Processes". AIChE Annual Meeting, Pittsburgh PA, October 2012. Presentation: Ruiz-Mercado G.J.; Smith, R.L.; Gonzalez, M.A.; Method for Chemical Process Sustainability Assessment and Design. Sustainability in (BIO) Pharmaceuticals Conference, San Juan PR, Nov 2012. (On Track...CONSIDERABLE INTEREST IS BEING SHOWN BY THE PROGRAM OFFICE IN GREENSCOPE, AS A TOOL.)
					Q3 FY2012	Demonstration of the application of sustainability principles to a chemical process. (On Track)
	5.2.4	5.2.4: Innovation and technology management for sustainable outcomes	STD	INGWERSEN, WESLEY W	Q3 FY2012	(2) Fully developed software support tools that includes: (i) Graphical user interface for input and output; (ii) TEST database of chemical properties, thermodynamic activity coefficients, and LCC properties; and (iii) single chemical replacement model. Software users' manual, journal article, Extramural document (Due date was changed to Q4 FY2012, and note that a late request from the Division came to make this a milestone, rather than a product...Request could not take place before the RMS edit period was shutdown.)
					Q4 FY2012	(1) Progress report on guidance development for product category rules for environmental product claims. 1 report and 1 journal article. (On Track)
						(3) Sign CRADA w/an industrial partner to research how to design supply chains to be as sustainable as possible. Cooperative agreement (On Track)



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J ART	J ART	A Markov Model for Building Life Cycle Energy Consumption.	WSWRD	(Jill Neal)	Q3 FY2012	Journal Article
		Comparison of propidium monoazide-quantitative PCR and reverse transcription quantitative PCR for viability detection of fresh <i>Cryptosporidium</i> oocysts following disinfection and after long-term storage in water samples.	GWERD	Liang, Z.; Keeley, A.	2012	Journal Article
		Determination of Mean Densities, Porosity and Thickness of Biofilm Attached on Irregular-shaped Media	WSWRD	(Jill Neal)	Q3 FY2012	Journal Article
		Economic Input-Output Life Cycle Assessment of Water Reuse Strategies in Residential Buildings.	WSWRD	(Jill Neal)	Q3 FY2012	Journal Article
		Internal/external Membrane Fouling in MBRs and Modeling.	WSWRD	(Jill Neal)	Q3 FY2012	Journal Article
		Optimizing Indoor Air Quality and Energy Savings through a Recovery Ventilator in ZNETH	WSWRD	(Jill Neal)	Q3 FY2012	Journal Article
		Performance Analysis of a Multi-Functional Heat Pump System in Cooling Mode	WSWRD	(Jill Neal)	Q3 FY2012	Journal Article
		Performance Analysis of a Multi-Functional Heat Pump System in Heating Mode.	WSWRD	(Jill Neal)	Q3 FY2012	Journal Article
		Reclamation of Greywater with Shredded Tire Biofilters and Membrane Bioreactors.	WSWRD	(Jill Neal)	Q3 FY2012	Journal Article
		Successful Green Commercial Building Practices: Analyzing Potential Influence within the Residential Sector.	WSWRD	(Jill Neal)	Q3 FY2012	Journal Article
OTH	OTH	What's the Deal with Methane?	GWERD	John T. Wilson, Nick de Sieyes, Douglas Mackay, Mark Toso, George DuVaul.	2012	Other
PAP	PAP	An approach to apply inclusion criteria to evaluate structures that are at risk for petroleum vapor intrusion at releases of gasoline from under ground storage tanks.	GWERD	John T. Wilson, Jim Weaver, Hal White	2012	Issue Paper
PRES	PRES	An integrated micrometeorological flux measurement system for reactive nitrogen and sulfur compounds; National Atmospheric Deposition Program Fall Meeting, Portland, Maine	APPCD	John T. Walker	Oct 3, 2012	Other
		Assessment of Methane and VOC Emissions from Select Upstream Oil and Gas Production Operations Using Remote Measurements, Interim Report on Recent Survey Studies; Annual Conference of the Air & Waste Management Association, in San Antonio, Texas	APPCD	Thoma	6/20/2012	Other
		Differential survival of waterborne <i>Cryptosporidium parvum</i> associated with agricultural matrices under fluctuating temperature.	GWERD	Liang, Z.; Keeley, A.	6/1/2012	Presentations/Posters
		Greenhouse Gas Mitigation Options Database and Analytical Modeling Approach; Joint US EPA & NCSU Poster Session	APPCD	Beck and Bhander	5/15/2012	Other



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PRES	PRES	Greenhouse Gas Mitigation Technology (Abbreviated version of GCRP presentation); Association for Environmental Studies & Sciences, Santa Clara, Calif.	APPCD	F. Princiotta	6/22/2012	Other
		Greenhouse Gas Mitigation Technology (Abbreviated version of GCRP presentation); Air & Waste Management Association Mega Symposium, Baltimore, Maryland	APPCD	F. Princiotta	8/23/2012	Other
		Greenhouse Gas Mitigation Technology (Abbreviated version of GCRP presentation); Air & Waste management Conference, San Antonio, Texas	APPCD	F. Princiotta	6/20/2012	Other
		Greenhouse Gas Mitigation Technology (Abbreviated version of GCRP presentation); Clearwater Coal Conference, Clearwater Florida	APPCD	F. Princiotta	6/4/2012	Other
		Presentation: Crude glycerol combustion: particulate, acrolein, and other volatile organic emissions; 34th International Symposium on Combustion, Warsaw Technical University, Warsaw, Poland	APPCD	W. Linak	7/30/2012	Other
		Presentation: Understanding the Role of a nano Ce Additive in the Size Distribution and Organic Composition of the Particulate Phase of Diesel Emissions; American Association for Aerosol Research Annual Meeting, Minneapolis, MN	APPCD	D. Nash	10/9/2012	Other
		Streamlining lifecycle greenhouse gas emissions of coal, conventional and unconventional natural gas for electricity generation; 2012 AIChE Annual Meeting	APPCD	Ozge Kaplan	11/1/2012	Other
		Summary of Aircraft BC Measurements; SAE E-31 annual meeting in San Diego the week of. This will be a summary of all work conducted to date.	APPCD	Kinsey	6/18/2012	Other
		Woody debris: Denitrification Hotspots and N2O Production in Fluvial Systems.	GWERD	Hyman, J., Arthur Gold, Kelly Addy, Ken Forshay, Paul Mayer, Peter Groffman	2012	Presentations/Posters
RPT	RPT	Generic Verification Protocol for Online Turbidimeters	ETAV	John McKernan	8/30/2012	Report
		Linden. K., O. Keen, N.G. Love, and D.S. Aga. Demonstrating Advanced Oxidation Coupled with Biodegradation for Removal of Carbamazepine. WERF/U of Michigan	WSWRD	(Mike Royer)	Q4 FY2012	Report
		Verification of Pall Corporation, Xact 625 Particulate Metals Monitor	ETAV	John McKernan	11/30/2012	Report
		Verification of Picometrix LLC T-Ray 4000® Time-Domain Terahertz System	ETAV	John McKernan	Q4 FY2012	Report
		Verification of Releasable Asbestos Field Sampler	ETAV	John McKernan	11/30/2012	Report



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SHC	1.1.2.2	Interoperability, standards and infrastructure	LRPCD	Gerry Laniak	Q3 FY2012	Internal and external workshop(s) to develop and maintain philosophy and tenets of research programs' sustainability information science and technology (informs above product)
	1.2.2.1	Inventory of sustainability indicators	STD	EASON, TARSHA N	Q4 FY2012	Guidance document for the use of the searchable database of sustainability indicators
						Initial architecture for a web tool to permit user-friendly database searching
						Inventory of available sustainability indicators in a searchable database
	2.1.4.3	Wetlands-Understanding the provisioning of ecosystem services provided by wetlands and their use in sustainable land and water management.	GWERD	CANFIELD, TIMOTHY J	Q3 and Q4 FY2012	Report on changes in numbers of Seaside Sparrows on RI salt marshes since 1979, and how those changes relate to changes in the marsh and changes in surrounding land use
	3.1.3	Analytical solutions for soil vapor extraction subject to diffusion in water table aquifer.	GWERD	Huang, Junqi	Q1 FY 2012	Journal Article
	3.1.3.1	Ground Water, Engineering, and Site Characterization & Monitoring Technical Support Centers	GWERD	Burden, David	2012	Published Report
				BURDEN, DAVID S	Q4 FY2012	Annual Report
	3.1.3.2	Technical support for policy, guidance, and targeted research for contaminated site management	LRPCD	PARKER, RANDY A	Q4 FY2012	Comparison of results of asbestos analysis by optical contract microscopy (PCM) and transmission electron microscopy (TEM) for three asbestos types and two filter loadings
	3.1.4.2	Effect of Mixing Regime on Oxygen Depletion and Toxicity in a Receiving Water Body Impacted by a Vegetable Oil Spill	LRPCD	VENOSA, ALBERT D	Q4 FY2012	Assessment of biodegradation kinetics and Microtox toxicity of canola oil with and without the presence of anti-oxidants to address the cleanup of vegetable oil spills. Delivery Date Changed to Q4 2013
	3.1.4.5	Association of acetic acid produced by biodegradation of ethanol with corrosion in the STP sumps of underground storage tanks.	GWERD	John T. Wilson, Cherri Adair, Cindy Paul, Andrea Barbary	2012	Journal Article
		Effect of biofuel degradation products on the possibility for natural anaerobic biodegradation of benzene in ground water	GWERD	Cherri Adair and John T. Wilson	2012	Journal Article
		Research Supporting L.U.S.T Sites - benzene movement	GWERD	Weaver, James W.	2012	Journal Article
		Research Supporting L.U.S.T Sites - vapor intrusion	GWERD	Weaver, James W.	2012	Journal Article
		Research Supporting L.U.S.T. Sites	GWERD	WEAVER, JAMES W	Q4 FY2012	Article on assessment of uncertainty in biotransformation for petroleum vapor intrusion in buildings
						Issue paper on aquifer vulnerability to contamination from L.U.S.T. sites
		Verification of Underground Storage Tank Automatic Tank Gauging Leak Detection Systems, Franklin Fueling Systems, TSP-IGF4 Water Float and TSP-IGF4P Float	ETAV	John McKernan	11/30/2012	Report



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SHC	3.1.4.5	Verification of Underground Storage Tank Automatic Tank Gauging Leak Detection Systems, Veeder-Root Standard Water Float and Phase-Two™ Water Detector	ETAV	John McKernan	Nov 30,2012	Report
	3.1.5.1	"Binary Mixtures of Permanganate and Chlorinated Volatile Organic Compounds in Ground Water Samples: Sample Preservation and Analysis"	GWERD	Johnson, K.T., St. Germaine, M.W., Ko, S., and Huling	2012	Journal Article
		"Persulfate regeneration of spent granular activated carbon – oxidative, acidic, and sulfur accumulation effects on MTBE sorption."	GWERD	Hutson, A., Ko, S., Huling, S.G.	2012	Journal Article
		"Fenton and Persulfate-Driven Regeneration of Spent Granular Activated Carbon."	GWERD	Huling, S.G.	November 12-15, 2012	Presentation
		"Ground Water Sampling at ISCO Sites – Binary Mixtures, Sample Preservation, Recommended Guidelines, and Case Studies"	GWERD	Huling, S.G.	October 22-26, 2012	Presentation
		"Oxidative treatments of chlorinated ethanes and ethenes mixture: comparative study of catalyzed H2O2 propagation, activated persulfate, and 2O2–persulfate co-amendment."	GWERD	Ko, S., Crimi, M., Marvin, B., Holmes, V., and Huling, S.G.	2012	Journal Article
		Analytical solutions for volatile organic compound intrusion coupled in vadose zone and water table aquifer	GWERD	Huang, Junqi	Q1 FY 2012	Journal Article
		Ground Water Sample Preservation at In-Situ Chemical Oxidation Sites – Recommended Guidelines, EPA Ground Water Forum Issue Paper.	GWERD	Ko, S., Huling, S.G., and Pivetz, B	2012	Journal Article
		Issue paper on aquifer vulnerability	GWERD	Weaver, James W.	2012	Other
	3.1.5.2	An approach for evaluating the progress of natural attenuation in groundwater. National Association of Remedial Program Managers.	GWERD	Wilson, John T.	2012	Presentations/Posters
		Applications of stable isotope analysis. Advanced Tools Workshop, U.S. EPA Region 3.	GWERD	Wilson, John T.	7/1/2012	Presentations/Posters
		Decision Support for Organic Contaminant Transport	LRPCD	WEAVER, JAMES W	Q4 2012	An approach for Evaluating the Progress of Natural Attenuation in Groundwater
					Q4 FY2012	Journal article on uncertainty in estimates of mass flux from NAPLs in simple subsurface settings. Delivery Date Changed to Q4 2013
		Overview of molecular biological tools available to understand biological reductive dechlorination. National Association of Remedial Program Managers.	GWERD	Keeley, A.	2012	Presentations/Posters
		Role of molecular biological tools during MNA and active remediation of chlorinated solvents sites. National Association of Remedial Program Managers.	GWERD	Keeley, A.	2012	Presentations/Posters
		Using compound-specific isotope analyses to evaluate biodegradation and MNA at chlorinated solvent sites. National Association of Remedial Program Managers.	GWERD	Wilson, John T.	2012	Presentations/Posters



Row Labels	Task ID #	Task Title	Task Division	Task Lead	Delivery Date	Product Description
SHC	3.2.4.1	Field vs. LEAF Lab Data Comparison Report: Collection and analysis of field data that compares more than 15 materials and field scenarios where industry and government research data are available.	APPCD	(blank)	Q4 FY2012	Report
		Support for OSWER in developing options for managing CCR	LRPCD	ALABED, SOUHAIL R	FY2012	Technical report on the efficacy and performance of coal combustion residue materials bound in concrete
	3.3.1.1	Mapping nitrogen sources and nitrogen impacted ecosystems at scales for national, regional and local decisions	LRPCD	ALABED, SOUHAIL R	Q2 FY2012	Map and report of nitrogen inputs to US at several levels of resolution provided to the National Atlas.
					Q4 FY2012	Report: Using model comparisons to reduce uncertainties in sources of nitrogen in US surface waters
	3.3.1.10	Large river floodplain restoration and re-connection effects on ecosystem services and nitrogen retention	GWERD	FORSHAY, KENNETH J	Q4 FY2012	Evaluations of natural and engineered N removing structures as a combination of EPA reports or journal articles that describe individual structures and habitats or combinations of structures and habitats.
	3.3.1.11	Wetlands and nitrogen in Narragansett Bay watershed	GWERD	Cathy Wigand	Q4 FY2012	Progress report of mesocosm (marsh organs) and greenhouse experiments. Not a NRMRL Product
	3.3.1.2	Informing sustainable nitrogen decisions using an ecosystem services framework	LRPCD	ALABED, SOUHAIL R	Q2 FY2012	Report synthesizing policy and management tools for reducing nutrients identifying the characteristics (social, environmental and economic) of sustainable nutrient management.
	3.3.1.3	Interactive impacts of nitrogen deposition and climate change on ecosystems and ecosystem services.	LRPCD	ALABED, SOUHAIL R	Q4 FY2012	Workshop report/journal article on the interactive impacts of nitrogen deposition and climate change on ecosystems and ecosystem services, focussing on water and hydrology, biodiversity, biogeochemical cycling, acidification, and ozone.
				LRPCD	FY2012	Report on N deposition critical loads, sensitive ecosystems and biota, and connections to ecosystem services for informing the review of National Ambient Air Quality Standards (NAAQS).
	3.3.1.5	Ecological engineering practices for the reduction of nonpoint source N in human influenced landscapes: A review	GWERD	Passeport, E., P. Vidon, K. Forshay, J. Hyman, S.S. Kaushal, D.Q. Kellogg, P.M. Mayer, E. Stander	2012	Journal Article
	3.5.1.3	Technology Innovation Cluster	IO	GUTIERREZ, SALLY C	Q4 FY2012	See SSWR Program; TIC products
	4.1.1.1	Synthesizing research and resources for a white paper on buildings and infrastructure solutions for communities and regional areas	LRPCD	ZIMMER, ANTHONY	Q4 2012	Synthesis and critical evaluation of building and infrastructure issues; summary of state of practice within communities, including best in field practices as benchmarks.



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SHC	4.1.3.1	EPA/FHWA Near Road Collaboration Project: Results from Las Vegas & Detroit, Presenter; Federal Highway Administration	APPCD	Kimbrough	6/13/2012	Other
		Presentation: Traffic Data Requirements: Meeting the Needs of Multiple Users. North American Traffic Monitoring Exposition and conference	APPCD	Kimbrough	6/7/2012	Other
		Role of Vegetation in Mitigating Near Road Emissions; EPA Region 9, San Francisco	APPCD	Baldauf	6/7/2012	Other
		Synthesizing research and resources for a white paper on sustainable transportation solutions for communities & regional areas	APPCD	BALDAUF, RICHARD W	Q4 FY2012	Synthesis and critical evaluation of transportation issues; summaries of state of practice within communities, including "best in field" practices as benchmarks.
	4.1.4.1	Tools for Improving Materials Management	LRPCD	KREMER, FRAN V	Q4 FY2012	Synthesis and critical evaluation of materials and waste management issues; summaries of state of practice within communities, including best in field practices as benchmarks.
	J ART	Technologies in the Built Environment to Enable Sustainability & Energy Conservation,	WSWRD	(Jill Neal)	Q3 FY2012	Journal Article
	related to 4.1.3.1	Carbonaceous Particulate Emitted from Light Duty Vehicles Operating on Elethanol Fuel Blends; American Association for Aerosol Research	APPCD	Hays	Oct, 2012	Other
		EPA ORD research on near source air pollution and mitigation opportunities; Southeast Diesel Collaborative (SEDC) annual meeting,	APPCD	Hagler	8/6/2012	Other
	Related to SHC 3.2.1	CCR and Effective Application of the LEAF Method for Beneficial Use; ORCR program office	APPCD	Thorneloe	Aug, 2012	Other
SHC	3.2.4.1	CCR Data Gap Analysis	APPCD	(blank)	Q4 FY2012	This is a report and computer software.
					6/1/2012	This is a report and computer software. Funding requested is to respond to comments on the document and associated access database being submitted for QA, peer, and administrative review. This project was funded by OSWER for \$85K which has been depleted. Although the initial work was funded through OSWER, ORD has asked for additional external peer reviews. Therefore, additional hours are needed for both the database and documentation to complete the activity by OSWER's deadline.



Row Labels	Task ID #	Task Title	Task Division	Task Lead	Delivery Date	Product Description
SHC	3.2.4.1	Cementitious materials report	APPCD	(blank)	6/1/2012	<p>This is a review of existing data for either LEAF or other comparable multi-point leach tests evaluating the difference in emissions with and without the use of fly ash in cementitious materials. A final report is available for external peer review. Report has cleared internal peer, QA and administrative reviews. Funds are requested to address additional external peer review comments that require technical input from our contractors and to revise the final report. Changes may include revision of figures, tables, and text. This project was funded by OSWER and we have already used some of our prior year funds to respond to internal comments. The funds requested represent our best estimate of what is needed to obtain the required contractor input to make any additional changes to the report before it is put in final form.</p>
		Cementitious materials reportThis is a review of existing data for either LEAF or other comparable multi-point leach tests evaluating the difference in emissions with and without the use of fly ash in cementitious materials.	APPCD	(blank)	Q4 FY2012	Report



Row Labels	Task ID #	Task Title	Task Division	Task Lead	Delivery Date	Product Description
SHC	3.2.4.1	Field vs. LEAF Lab Data Comparison Report	APPCD	(blank)	9/1/2012	As requested by Science Advisory Board (SAB), we are completing collection and analysis of data that compares more than 15 materials and field scenarios where industry and government research data are available. The details of this work have been discussed with OSWER to determine how best to respond to SAB's request as well as explain how single and multi-point data compares across changing environmental conditions. Over 35 constituents of potential concern are being tracked calculating the constituent release rates over the plausible pH range for different scenarios. OSWER views the inclusion of the LEAF methods into SW-846 as essential for the current regulation and plans for the findings to be presented at their 2013 meeting with the SAB. The funds requested are for what we anticipate to be hundreds of hours to work with our contractor to complete data and statistical analysis, prepare figures, and document the results into a report. We also have included within the request the resources needed to address all levels of review including external peer review. This report includes data analysis, geochemical speciation modeling to determine fraction of constituents at the liquid - solid interface and will include details of the leaching
		Interlab Validation Report:  LEAF Methods 1313 and 1316	APPCD	(blank)	9/1/2012	These are the two batch LEAF methods that have completed all internal reviews and are now being submitted per the NRMRL Lab Director into external peer review. The requested funding is for the contractor to provide technical input needed to address any comments from the outside peer review.



Row Labels	Task ID #	Task Title	Task Division	Task Lead	Delivery Date	Product Description
SHC	3.2.4.1	Interlab Validation Report: LEAF Methods 1314 and 1315	APPCD	(blank)	9/1/2012	The analytical work is completed (having worked with over 20 participating labs). The major efforts in FY 2012 are to summarize the results and conduct statistical analyses. For more than 35 constituents of potential concern, we reporting the results of Method 1314 (up-flow column test) and Method 1315 (tank test for granular and monolithic materials). We also calculate and present the constituent release rates across changing environmental conditions. The funding will be for hundreds of hours for senior researchers to calculate and compare constituent release rates for over 35 constituents of potential concern. The data also being used to characterize unique leaching characteristics based on air pollution control type and coal type. The statistical analysis provides a range of statistics for the data and documents both across and within lab variability. Funding is also needed to complete multiple revisions to the report due to multiple reviews including external peer review.
		LEAF Methods 1313 and 1316: Interlab Validation Report: Comparison of across and within lab variability.	APPCD	(blank)	Q4 FY2012	Report
		LEAF Methods 1314 and 1315: Interlab Validation Report: Comparison of across and within lab variability.	APPCD	(blank)	Q4 FY2012	Report
	3.4.2.1	CCR and Effective Application of the LEAF Method for Beneficial Use; ORCR program office	APPCD	Thorneloe	Aug, 2012	Presentations/Posters
	(blank)	Response to comments on the draft EPA report, Pavillion	GWERD	Digiulio, Dominic	2012	Other
SSWR	7.1	SSWR 7.1 Case Studies on the Impact of Concentrated Animal Feeding Operations (CAFOs) on Ground Water Quality	GWERD	Hutchins, S.R., White, M.V., Mravik, S.	2012	EPA Report
		The Critical Role of Water Reuse in EPA-ORD's Research Action Plan. Water To be presented at the Reuse Research Foundation Annual Research Conference	WSWRD	(Chris Impellitteri)	Q3 FY2012	Presentation
		Response of a GFP-THBzip transgenic Xenopus model to select thyroid active compounds	WSWRD	(Joel Allen)	Q FY2013	Abstract/oral presentation prepared for SETAC 2013



Row Labels	Task ID #	Task Title	Task Division	Task Lead	Delivery Date	Product Description
SSWR		Responses of <i>Vibrio fischeri</i> to Selected Contaminants in an Automated Online Toxicity Monitoring System Automated Online Toxicity Monitoring System	WSWRD	(Joel Allen)	Q3 FY2012	Journal Peer-reviewed (Environ. Toxicol. Chem.)
	5.2F	Communicating Research to Small Drinking Water Systems: Dissemination by Researchers. To be Presented at AWWA Annual Conference and Exposition, Dallas, TX, June 10 - 14, 2012.	WSWRD	(Michelle Latham)	Q2 FY2012	Presentation
	1.2C	Consequences of an excess total dissolved solids dosing gradient as chloride, sodium, and calcium in stream mesocosms.	WSWRD	(Chris Nietch)	Q4 FY2012	Journal Peer-reviewed (Environ. Toxicol. Chem.)
		Effects of a chronic lower range of triclosan exposure to a stream mesocosm community.	WSWRD	(Chris Nietch)	Q3 FY2012	Journal Peer-reviewed (Environ. Toxicol. Chem.)
		Examining the feasibility of water quality trading in the East Fork Watershed Case Study I: Steps to Watershed Model Setup	WSWRD	(Chris Nietch)	Q4 FY2012	EPA Report
		Microbial source tracking experimental stream facility fate and transport study.	WSWRD	(Chris Nietch)	Q4 FY2012	Journal Peer-reviewed (Environ. Sci. Technol. - Lead Author: Lindsay Peed)
		Validating excess TDS effects using stream mesocosm methods	WSWRD	(Chris Nietch)	Q FY2013	Abstract/oral presentation prepared for SETAC 2013
	1.2C, 2.3E	related to task 1.2C, 2.3E - Sustainable nitrogen management tools and case studies	GWERD	Forshay, Kenneth J.	2013	Data
	1.2H	Hyporheic flow patterns in relation to large river floodplain attributes. related to task 1.2H	GWERD	Faulkner, B.R., J.R. Brooks, K.J. Forshay, S.P. Cline	2012	Journal Article
	2.2B	The Persistence of <i>Francisella tularensis</i> in Acidic Solutions. To be presented at American Society for Microbiology 112th General Meeting, San Francisco, CA, June 16-19, 2012	WSWRD	(Noreen Adcock)	Q2 FY2012	Presentation
	2.3E	Influence of natural & novel organic carbon sources on denitrification in forested, degraded urban, & restored streams. Related to task 2.3E	GWERD	Newcomer, Tamara A., Sujay S. Kaushal, Paul M. Mayer, Amy R. Shields, Elizabeth A. Canuel, Peter M. Groffman, and Arthur J. Gold	2012	Journal Article
		Low elevation old channel features of the Willamette River floodplain support high subsurface denitrification rates. relates to task 2.3E	GWERD	Forshay, Ken	8/1/2012	Presentations/Posters
		Nitrate Removal in Two Relict Oxbow Urban Wetlands: A 15N Mass-balance Approach Related to task 2.3E	GWERD	Harrison, Melanie D., Peter M. Groffman, Paul M. Mayer, and Sujay S. Kaushal.	2012	Journal Article
		Sustainable Nutrient Removal Strategies and Technologies Related to task 2.3E	GWERD	Mayer, Paul M.	2013	Paper in EPA proceedings
	2.4.1.A1	EPA Hydraulic Fracturing Study Task 2.4A	GWERD	Jewett, David J.	2013	Published Report



Row Labels	Task ID #	Task Title	Task Division	Task Lead	Delivery Date	Product Description
SSWR	4.2A	SSWR 4.2A Place based and experimental monitoring of green and grey infrastructure, best management practices (BMPs), and BMP treatment trains	WSWRD	SIMON, MICHELLE A	Q4 FY2012	4.2.A.1 Identify green infrastructure BMP performance data needs/gaps
	4.2B	A factorial study of rain garden design for nitrogen removal to be submitted to the Journal Wetlands (Sivajini Gilchrist) Task 4.2. B	WSWRD	SIMON, MICHELLE A	Q4 FY2012	Peer-Reviewed Journal Article
		Assessment of Clogging Dynamics in Permeable Pavement Systems with Time Domain Reflectometers (TDRs)" To be submitted to ASCE Journal of Environmental Engineering (Robert Brown & Mike Borst) Task 4.2.B	WSWRD	SIMON, MICHELLE A	Q4 FY2012	Peer Reviewed Journal Article
		BEAULIEU, J., C.P. ARANGO, A.D. BALZ, AND W.D. SHUSTER. Continuous monitoring reveals daily, seasonal, and annual variation in ecosystem metabolism in an urban stream. Submitted to Ecosystems. (Jake Beaulieu) Relates to Task 4.2B, 2.3E	WSWRD	SHUSTER, WILLIAM D	Q4 FY2012	Peer-Reviewed Journal Article
		Bioretention systems: 2x2x4 factorial design for nitrate removal - vegetated vs un-vegetated rain gardens to be submitted to Journal Wetlands (Sivajini Gilchrist) Task 4.2.B	WSWRD	SIMON, MICHELLE A	Q4 FY2012	Peer-Reviewed Journal Article
		Bioretention Systems: Partial Factorial Designs for Nitrate Removal. To be Presented at 5th Annual Ohio Stormwater Conference, SeaGate convention Center, Toledo, OH, June 06 - 08, 2012. (Sivajini Gilchrist & Mike Borst) TASK 4.2B	WSWRD	SIMON, MICHELLE A	Q2 FY2012	Presentation
		Chloride release from three permeable pavement surfaces after winter salt applications To be submitted to ASCE Journal of Environmental Engineering (Mike Borst & Robert Brown) Task 4.2.b	WSWRD	SIMON, MICHELLE A	Q4 FY2012	Peer-Reviewed Journal Article
		Designing Bioretention Systems to Improve Nitrogen Removal. To be Presented at Ecological Society of America Annual Meeting, Portland, OR, August 06 - 10, 2012. (Mike Borst) TASK 4.2B	WSWRD	SIMON, MICHELLE A	Q3 FY2012	Presentation
		HALL R.O. AND J. BEAULIEU. Estimating autotrophic respiration in streams using daily metabolism data. In prep for Freshwater Science. (Jake Beaulieu) Relates to Task 4.2B, 2.3E	WSWRD	SHUSTER, WILLIAM D	Q4 FY2012	Peer-Reviewed Journal Article
		Hydrological performance of rain gardens to be submitted to the journal Hydrological Processes (Sivajini Gilchrist) Task 4.2.B	WSWRD	SIMON, MICHELLE A	Q4 FY2012	Peer-Reviewed Journal Article
		MACHAVARUM, M., J. BEAULIEU, M. MILLS. Direct gas injection method: A simple modification to EA-IRMS for stable isotope analysis of 15N and 13C from N2O and CO2 gases in nanomolar quantities. In prep for Rapid Communications in Mass Spectrometry. (Jake Beaulieu) Relates to Task 4.2B, 2.3E	WSWRD	SHUSTER, WILLIAM D	Q4 FY2012	Peer-Reviewed Journal Article



Row Labels	Task ID #	Task Title	Task Division	Task Lead	Delivery Date	Product Description
SSWR	4.2B	O'CONNOR, T., S. Muthukrishnan, K. Barshatzky, AND W. Wallace. Analysis of trace metal accumulation in sediments and macroinvertebrates before and after maintenance of a constructed wetland. WATER ENVIRONMENT RESEARCH. Water Environment Federation, Alexandria, VA. TASK 4.2B	WSWRD	DETENBECK, NAOMI E	Q4 FY2012	Peer-Reviewed Journal Article
		Performance and Function of Green Infrastructure Stormwater Control Measures" to be given in Harrisburg, PA Sept 2012 TASK 4.2B	WSWRD	SIMON, MICHELLE A	Q3 FY2012	Presentation
		SCHAEFFER J. AND J. BEAULIEU. Calibration of the Odyssey photosynthetic recorder for absolute irradiance measures. In Press at Journal of Freshwater Ecology. (Jake Beaulieu) Relates to Task 4.2B, 2.3E	WSWRD	SHUSTER, WILLIAM D	Q4 FY2012	Peer-Reviewed Journal Article
		Using Pressure Transducers to Measure Changes in Infiltration and Exfiltration from Permeable Pavement Strips" To be submitted to ASCE Journal of Hydrologic Engineering (Robert Brown & Mike Borst) TASK 4.2B	WSWRD	SIMON, MICHELLE A	Q4 FY2012	Peer-Reviewed Journal Article
	4.3D	LEE, J. G., A. SELVAKUMAR, K. Alvi, J. Riverson, J. X. Zhen, L. Shoemaker, AND F. Lai. SUSTAIN: Watershed-scale Design Optimization Model for Stormwater Best Management Practices. ENVIRONMENTAL MODELLING & SOFTWARE. Elsevier Science, New York, NY. (Ari Selvakumar) TASK 4.3D	WSWRD	ROSSMAN, LEWIS A	Q4 FY2012	Peer-Reviewed Journal Article
		National Stormwater Calculator (in review - web site TBD)	WSWRD	ROSSMAN, LEWIS A	Q4 FY2012	Software
		National Stormwater Calculator Users Guide. National Risk Management Research Laboratory, U.S. Environmental Protection Agency, Cincinnati, OH (in review). TASK 4.3D	WSWRD	ROSSMAN, LEWIS A	Q4 FY2012	Report
		Reichel, B.I., S. Sharvelle, and L. Roesner. Development of the Integrated Urban Water Model. WERF/Colorado State University. (Mike Royer) TASK 4.3D	WSWRD	ROSSMAN, LEWIS A	Q4 FY2012	Report (Online PDF)
		SWMM 5 - A Case Study of Model Re-Development. To be presented at Fifty Years of Watershed Modeling Conference, Boulder, CO, September 24-26, 2012. TASK 4.3D	WSWRD	ROSSMAN, LEWIS A	Q3 FY2012	Presentation
	5.2B	Pressman, J.G., McCurry, D.L., Parvez, S., Rice, G.E., Teuschler, L.K., Miltner, R.J., Speth, T.F. Disinfection Byproduct Formation in Reverse-Osmosis Concentrated and Lyophilized Natural Organic Matter from a Drinking Water Source. Water Research (submitted) TASK 5.2B	WSWRD	PRESSMAN, JONATHAN G	Q4 FY2012	Peer-Reviewed Journal Article
	5.2C	ETV shipboard ballast water technology verification protocol TASK 5.2C	WSWRD	FREDERICK, RAY M	Q4 FY2012	Report (Draft)
	5.2D	SSWR 5.2D Development and optimization of biological treatment for drinking water facilities	WSWRD	LYTLE, DARREN A	Q4 FY2012	5.2.D.1 Use of biological treatment for ammonia control
	5.2F	Arsenic Species in Ground Water TASK 5.2F	WSWRD	SORG, THOMAS J	Q4 FY2012	Peer-Reviewed Journal Article



Row Labels	Task ID #	Task Title	Task Division	Task Lead	Delivery Date	Product Description
SSWR	5.2F	Capital and O/M costs of Arsenic Removal SystemsTask 5.2F	WSWRD	SORG, THOMAS J	Q4 FY2012	Peer Reviewed Journal Article
		Fairey, J. L. and Wahman, D. G. (Submitted) Bayesian and Frequentist Methods for Estimating Joint Uncertainty of Freundlich Adsorption Isotherm Fitting Parameters. Journal of Environmental Engineering. Task 5.2F	WSWRD	SORG, THOMAS J	Q4 FY2012	Peer Reviewed Journal Article
		London, M. R., Wahman, D. G., Katz L. E., and Speitel G. E. Jr. (Submitted) Zero-Valent Iron/Biotic Treatment System for Perchlorate-Contaminated Water: Lab-Scale Performance, Modeling, and Full-Scale Implications. Water Research. Task 5.2F	WSWRD	SORG, THOMAS J	Q4 FY2012	Peer-Reviewed Journal Article
		Regeneration of Exhausted Arsenic Adsorptive MediaTask 5.2F	WSWRD	SORG, THOMAS J	Q4 FY2012	Peer Reviewed Journal Article
		Treatment of fipronil and four of its degradates (amide, sulfide, sulfone, desulfinyl) (Richard Miltner)Task 5.2F	WSWRD	SORG, THOMAS J	Q4 FY2012	Peer Reviewed Journal Article
		Treatment of five organophosphate pesticides (fenamiphos, mevinphos, diclorophos, dichlorvos, terbufos) (Richard Miltner)Task 5.2F	WSWRD	SORG, THOMAS J	Q4 FY2012	Peer Reviewed Journal Article
		Treatment of seven carbamate pesticides (carbofuran, oxamyl, aldicarb, carbaryl, methiocarb, propoxur, molinate) (Richard Miltner)Task 5.2F	WSWRD	SORG, THOMAS J	Q4 FY2012	Peer Reviewed Journal Article
		Treatment of seven unrelated pesticides (diuron, tebuconazole, isoxaben, tebufenozide, clethodim, acetochlor, strychnine) (Richard Miltner)Task 5.2F	WSWRD	SORG, THOMAS J	Q4 FY2012	Peer Reviewed Journal Article
	5.2F? 5.3A?	"Membrane bioreactor technology for the treatment of emerging contaminants: a critical review"Task 5.2F? 5.3A?	WSWRD	(Craig Patterson)	Q3 FY2012 (Will Submit For ORD Clearance in July)	Journal Article
	5.3A	Future Trends Shaping Innovation in Water Technology & Services Markets (Jeff Adams) Task 5.3A	WSWRD	HARTEN, TERESA M	Q4 FY2012	EPA Report
		Removal of Microbial Contaminants in Drinking Water by Ultraviolet Light Technology - ATG UV Technology/ETS System ECP-113-5 (Jeff Adams) Task 5.3A	WSWRD	HARTEN, TERESA M	Q4 FY2012	EPA Report
		REVIEW OF THE ATLANTIUM TECHNOLOGIES ULTRAVIOLET SYSTEM MODEL R-200 2-Bell (Jeff Adams) Task 5.3A	WSWRD	HARTEN, TERESA M	Q4 FY2012	EPA Report
		SSWR 5.3A Water Technology Innovation Cluster: Develop sustainable processes for contaminant (including nutrient) removal below the limits of current technologies that minimizes costs, energy consumption, environmental burden, chemical consumption, and associated greenhouse gases production	IO	HARTEN, TERESA M	Q4 FY2012	5.3.A.1 Develop water treatment, residuals management, and monitoring technologies for drinking water and wastewater systems



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SSWR	5.4B?	Microbial Risk Assessment for Greywater Used for Landscape Irrigation Task 5.4B?	WSWRD	(Jill Neal)	Q3 FY2012	Journal Article (Risk Analysis or HERA)
	5.5.E	Effect of pH on the Electrophoretic Mobility of Surrogate Spores of Bacillus anthracis in Aqueous Solutions (Darren Lytle) Task 5.5E	WSWRD	RODGERS, MARK R	Q4 FY2012	Peer-Reviewed Journal Article
	5.5B	IWA Code of Practice for corrosion control contribution	WSWRD	SCHOCK, MICHAEL R	Q4 FY2012	Report
		"Lead Adsorption into Activated Carbon - a Critical Review of the Literature" (Craig Patterson) Task 5.5B	WSWRD	SCHOCK, MICHAEL R	Q3 FY2012 (Submitting for clearanec in August)	Peer-Reviewed Journal Article
		Contribution in Jour NEWWA paper on modeling Pb distribution in LSL and premise plumbing (sending draft for clearance today) Task 5.5B	WSWRD	SCHOCK, MICHAEL R	Q4 FY2012	Peer-Reviewed Journal Article
		IWA report contribution for joint UK-US-Canada LSL sampling study. Task 5.5B	WSWRD	SCHOCK, MICHAEL R	Q4 FY2012	Report
		Manuscript submitted on mineralogy of galvanic corrosion. Task 5.5B	WSWRD	SCHOCK, MICHAEL R	Q4 FY2012	Peer-Reviewed Journal Article
	5.5C	Lee, W. H., Wahman, D. G., Bishop, P. L., and Pressman, J. G. (2012) Carbon-Fiber Nitrite Microsensor for In Situ Biofilm Monitoring. Proceedings of the 2012 IWA World Water Congress & Exposition, Busan, South Korea, September 16-21, 2012. Task 5.5C	WSWRD	PRESSMAN, JONATHAN G	Q3 FY2012	Presentation
		Lee, W. H., Wahman, D. G., Bishop, P. L.; Pressman, J. G. (2012) Using Microelectrodes and Live/Dead BacLight to Compare Penetration, Activity, and Viability within Nitrifying Biofilm Subjected to Free Chlorine, Monochloramine, and Free Ammonia. Proceedings of the 244th ACS National Meeting, Philadelphia, Pennsylvania, August 19-23, 2012. Task 5.5C	WSWRD	PRESSMAN, JONATHAN G	Q3 FY2012	Presentation
		Pressman, J.G., McCurry, D.L., Parvez, S., Rice, G.E., Teuschler, L.K., Miltner, R.J., Speth, T.F. Lyophilization, Reconstitution, and DBP formation in RO Concentrated NOM from a Drinking Water Source. American Water Works Association Annual Conference and Exposition, Dallas, TX, June 13, 2012. Task 5.5C	WSWRD	PRESSMAN, JONATHAN G	Q2 FY2012	Presentation
		Routt, J. C., Wahman, D. G., and Wilczak A. (Submitted) Chapter 4 - Overview of Causes and Control of Nitrification in Chloraminated Drinking Water Distribution Systems. In Fundamentals and control of nitrification in chloraminated drinking water distribution systems (AWWA Manual M56). American Water Works Association, Denver, Colorado. Task 5.5C	WSWRD	PRESSMAN, JONATHAN G	Q4 FY2012	Chapter in Manual



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SSWR	5.5C	Schranz, K. A., Pressman, J. G., Oerther, D. B., and Wahman, D. G. (2012) The Impact of Monochloramine on Ammonia-Oxidizing Bacteria in Lab-Scale Annular Reactors. Proceedings of the 112th General Meeting of the American Society for Microbiology, San Francisco, California, June 16-19, 2012. Task 5.5C	WSWRD	PRESSMAN, JONATHAN G	Q2 FY2012	Presentation
		Schranz, K. A., Pressman, J. G., Oerther, D. B., and Wahman, D. G. (2012) The Impact of Monochloramine on Ammonia-Oxidizing Bacteria in Lab-Scale Annular Reactors. Proceedings of the 112th General Meeting of the American Society for Microbiology, San Francisco, California, June 16-19, 2012. Task 5.5C	WSWRD	PRESSMAN, JONATHAN G	Q2 FY2012	Presentation
		Wahman, D. G. and Pressman, J. G. (Submitted) Chapter 39 - Nitrification in Chloraminated Drinking Water Distribution Systems: Factors Affecting Occurrence. In Comprehensive Water Quality and Purification. Elsevier. Task 5.5C	WSWRD	PRESSMAN, JONATHAN G	Q4 FY201	Presentation
		Wahman, D. G. and Pressman, J. G. (Submitted) Chapter 39 - Nitrification in Chloraminated Drinking Water Distribution Systems: Factors Affecting Occurrence. In Comprehensive Water Quality and Purification. Elsevier. Task 5.5C	WSWRD	PRESSMAN, JONATHAN G	Q4 FY2012	Book Chapter
		Wahman, D. G. and Speitel G. E. Jr. (2011) Simulations and Experiments Reveal the Relative Significance of the Free Chlorine/Nitrite Reaction in Chloraminated Systems. Proceedings of the American Water Works Association 2011 Water Quality Technology Conference, Phoenix, Arizona, November 13-17, 2011. Task 5.5C	WSWRD	PRESSMAN, JONATHAN G	Q3 FY2012	Presentation
		Wahman, D. G. and Speitel G. E. Jr. (2012) Relative Importance of Nitrite Oxidation by Hypochlorous Acid under Chloramination Conditions. Environmental Science & Technology. Task 5.5C	WSWRD	PRESSMAN, JONATHAN G	Q4 FY2012	Peer-Reviewed Journal Article
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Row Labels	Task ID #	Task Title	Task Division	Task Lead	Delivery Date	Product Description
SSWR	5.5E	Randy P. Revetta, Vicente Gomez Alvarez, Jorge W. Santo Domingo, Tammie L. Gerke, and Nicholas J. Ashbolt. Changes in Biofilm Community Structure Associated with Monochloramine-treated Drinking Water Biofilms. American Society for Microbiology, San Francisco, CA June 16-22 2012. Task 5.5E	WSWRD	RODGERS, MARK R	Q2 FY2012	Presentation
		Randy P. Revetta, Vicente Gomez Alvarez, Jorge W. Santo Domingo, Tammie L. Gerke, and Nicholas J. Ashbolt. Changes in Biofilm Community Structure Associated with Monochloramine-treated Drinking Water Biofilms. Environmental Science and Technology. Submitted Task 5.5E	WSWRD	RODGERS, MARK R	Q4 FY2012	Peer-Reviewed Journal Article
	5.6A	Grigg, N.S., P.D. Rogers, and S. Edmiston. Retrospective Analysis of Performance of Dual Distribution Systems. WERF/WaterRF. (Mike Royer) Task 5.6A	WSWRD	SELVAKUMAR, ARIAMALAR	Q4 FY2012	Published Report
		Lauwo, S., S. Sharvelle, and L. Roesner. Advanced Sewer System Designs and Technologies. A Review of the World-Wide Literature. WERF. Task 5.6A	WSWRD	SELVAKUMAR, ARIAMALAR	Q4 FY2012	Published Report (Online PDF)
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		Matthews, J., A. SELVAKUMAR, AND W. Condit. Current and Emerging Water Distribution Main Renewal Technologies. Urban Water Journal. Taylor & Francis Group, London, UK. Task 5.6A	WSWRD	SELVAKUMAR, ARIAMALAR	Q4 FY2012	Peer-Reviewed Journal Article
		Matthews, J., B. Nestleroth, W. Condit, and J. Thomson. Evaluation of Opportunities To Improve Structural Inspection Capabilities For Water Mains: Large Diameter Cast Iron Pipe. U.S. Environmental Protection Agency. Washington, DC, Task 5.6A	WSWRD	SELVAKUMAR, ARIAMALAR	Q4 FY2012	EPA Report
		Nestleroth, B., S. Flamberg, V. Lal, W. Condit, and J. Matthews. Field Demonstration of Innovative Condition Assessment Technologies for Water Mains: Acoustic Pipe Wall Assessment, Internal Inspection, and External Inspection. Volume I Technical Report; Volume II Appendices. U.S. Environmental Protection Agency, Washington, DC, Task 5.6A	WSWRD	SELVAKUMAR, ARIAMALAR	Q4 FY2012	EPA Report
		REHABILITATION OF AGING WATER INFRASTRUCTURE SYSTEMS: KEY CHALLENGES AND ISSUES. (Ari Selvakumar & Tony Tafuri) Task 5.6A	WSWRD	SELVAKUMAR, ARIAMALAR	Q4 FY2012	Peer-Reviewed Journal Article
		Review of Wastewater and Water System Renewal Decision Making Tools and Approaches. Journal of Pipeline Systems Engineering and Practice. American Society of Civil Engineers (ASCE), Reston, VA. Task 5.6A	WSWRD	SELVAKUMAR, ARIAMALAR	Q4 FY2012	(blank)



Row Labels	Task ID #	Task Title	Task Division	Task Lead	Delivery Date	Product Description
SSWR	5.6A	SELVAKUMAR, A., E. Kampbell, D. Downey, AND W. Condit. Quality Assurance and Quality Control Practices For Rehabilitation of Sewer and Water Mains. URBAN WATER. Elsevier Science Ltd, New York, NY. Task 5.6A	WSWRD	SELVAKUMAR, ARIAMALAR	Q4 FY2012	(blank)
		Simicevic, J., and E. Allouche. Web-based Decision Support Tools for Selection of Condition Assessment and Rehabilitation Methods for Laterals. WERF/Louisiana Tech (Mike Royer) Task 5.6A	WSWRD	SELVAKUMAR, ARIAMALAR	Q4 FY2012	Published Report and Database
		Sinha, S. Water Infrastructure Database (WaterID). WERF/Virginia Tech (Mike Royer) Task 5.6A	WSWRD	SELVAKUMAR, ARIAMALAR	Q2 FY2012	Database
		Thomson, J., S. Flamberg, and W. Condit. Primer on Condition Curves for Water Mains. U.S. Environmental Protection Agency. Washington, DC, Task 5.6A	WSWRD	SELVAKUMAR, ARIAMALAR	Q4 FY2012	EPA Report
	5.6B	Cong, L., Y. J. YANG, G. Shiwen, Z. Tu-qiao, M. Xinwei, AND S. Weiyun. CHLORINE DECAY AND TRIHALOMETHANES FORMATION SIMULATION IN A PILOT-SCALE WATER DISTRIBUTION SYSTEM. WATER ENVIRONMENT RESEARCH. Water Environment Federation, Alexandria, VA. Task 5.6B	WSWRD	YANG, YINGPING J	Q4 FY2012	Peer-Reviewed Journal Article
		Li, Z., R. M. Clark, S. G. Buchberger, AND Y. J. YANG. Assessing the Impact of Climate Change on Drinking Water Treatment Plant Design and Operation. JOURNAL OF WATER RESOURCES PLANNING AND MANAGEMENT. American Society of Civil Engineers (ASCE), Reston, VA. Task 5.6B	WSWRD	YANG, YINGPING J	Q4 FY2012	Peer-Reviewed Journal Article
		Li, Z., S. G. Buchberger, R. M. Clark, AND Y. J. YANG. Performance Evaluation of GAC Model in Drinking Water Treatment Using Field Measurements. Journal AWWA. American Water Works Association, Denver, CO. Task 5.6B	WSWRD	YANG, YINGPING J	Q4 FY2012	Peer-Reviewed Journal Article
		YANG, Y. J. AND K. METCHIS. Adapting Water Infrastructure to Precipitation Changes: Engineering Review and Analysis of Adaptation Needs and Attributes. CRITICAL REVIEWS IN ENVIRONMENTAL SCIENCE AND TECHNOLOGY. CRC Press LLC, Boca Raton, FL. Task 5.6B	WSWRD	YANG, YINGPING J	Q4 FY2012	Peer-Reviewed Journal Article
		YANG, Y. J. Climate Periodicity in Quaternary Geology and Modern Hydrology: Similar Rhythm for the Future? (ed.), Submitted to: Global and Planetary Change. Elsevier BV, AMSTERDAM, Netherlands. Task 5.6B	WSWRD	YANG, YINGPING J	Q4 FY2012	Peer-Reviewed Journal Article



Row Labels	Task ID #	Task Title	Task Division	Task Lead	Delivery Date	Product Description
SSWR	relates to task 2.3E	Approaches to characterizing biogeochemistry effects of groundwater and surface water interaction at the riparian interface.	GWERD	Mayer, Paul, Curtis Cooper, Ken Forshay, Sujay Kaushal, Michael Langland, Dennis Low, Dorothy Merritts, Gwen Sivirichi, and Robert Walter.	6/1/2012	Presentations/Posters
	relates to task 2.3E, 4.2A	Burial affects the biogeochemistry of headwater streams in a midwestern US metropolitan area.	GWERD	Beaulieu Jake J, Paul M Mayer, Sujay S Kaushal, Michael J Pennino, Clay P Arango, David A	2012	Presentations/Posters
SSWR	5.5D	Accumulation of Radioactive Contaminants in Drinking Water Distribution Systems Task 5.5D	WSWRD	LYTLE, DARREN A	Q4 FY2012	Peer-Reviewed Journal Article
		LYTLE, D. A. AND R. Copeland. OXIDATION-REDUCTION POTENTIAL MEASUREMENTS OF IMPORTANT OXIDANTS IN DRINKING WATER. AQUA. IWA Publishing, London, Uk. Task 5.5D	WSWRD	LYTLE, DARREN A	Q4 FY2012	Peer-Reviewed Journal Article
		LYTLE, D. A., D. WILLIAMS, AND C. P. WHITE. A SIMPLE APPROACH TO ASSESSING COPPER PITTING CORROSION TENDENCIES AND DEVELOPING CONTROL STRATEGIES. JOURNAL OF WATER SUPPLY: RESEARCH AND TECHNOLOGY - AQUA. IWA Publishing, London, Uk. Task 5.5D	WSWRD	LYTLE, DARREN A	Q4 FY2012	Peer-Reviewed Journal Article
	(blank)	"Fate and Effects of Leachate Contamination on Alaska's Tribal Drinking Water Sources" Technical Support/RARE	WSWRD	(Craig Patterson)	Q2 FY2012 (Will Submit for ORD Clearance in June)	Region 10 RARE Project Summary Report
Grand Total						